

## WESTERN ROADS ARE POOR; STILL UNFIT FOR TRUCKS

Autocar Engineers Say Nevada Has the Best  
Highways and That California Is Most  
Motorized State They Saw on Trip.

Ardmore, Pa., Nov. 22.—This country has hardly made a beginning in developing good roads, according to the opinion of the Autocar engineers, who have reached Ardmore after crossing the continent and back again with a fully loaded new type of heavy-duty Autocar and the familiar model of the 1 1/2 to 2-ton capacity. The party left Ardmore on July 14, going West over the Lincoln

Highway to California, and returning by the Santa Fe trail. A total of 7,612 miles was covered with an average of 110 miles a day. West of the Mississippi River the prevailing "good road" is one that is hard once in a while, with no consideration given as to what its condition may be after a rain.

Nevada Roads Excel.  
In comparison to its population, Nevada was found to have more

good roads than any other State crossed either way. If Pennsylvania, for instance, had as many miles of permanent road for each thousand of population as Nevada, every single highway and byway, main thoroughfare and country lane, would be permanently surfaced with the best type of modern road construction.

The Autocar engineers who made this trip either on foot or in part, included E. B. Bachman, A. B. Cumner, A. K. Brumbaugh, Nelson S. Pringle, H. M. Coale, A. H. Bishop, George Hay, Frank Gardner and John Archfield.

The two Autocars with capacity loads successfully made the ascent of Pike's Peak and are the first motor trucks that have ever made that ascent with such loads. They also were able to negotiate this climb without any adjustment of motors. The road up Pike's Peak is a good road, amply broad enough for cars to pass each other readily and with a good surface, although somewhat soft in places. From the toll gate at the bottom to the summit is eighteen miles with an average grade of 7.5 per cent and an official maximum of 10.5 per cent. The gradometer of the Autocar party, however, showed a grade of 16 per cent in some places near the top.

This climb is 7,000 feet in eighteen miles with a road so winding that in one spot, looking both above and below, one can see the road in seventeen different places. The climb was made in five hours and the return down the mountain in one and one-half hours.

Freighting Impractical.  
Motor truck freighting across the continent is possible, but not very practical because of the road conditions prevailing in many places west of the Mississippi. Passenger cars are able to skim at high speed over roads on which loaded trucks would cut through and sink into 8 or 10 inches of sand. All inquiries as to conditions of roads, also, are answered by the natives from the passenger car standpoint. A road that is rough they would call bad, no matter how hard the foundation under it might be.

The light, smooth road, however, would be called good, even though loaded trucks on it might sink into the sand up to their hubs.

The feeling of the men who made the trip between the Mississippi Valley and California, was unanimous that the Santa Fe was in much better shape than the Lincoln Highway. Roads were better, with better grades, and better hotel accommodations. Garages were found plentiful over both roads.

California Most Motorized.  
California was found to be much more completely motorized than any other State crossed. In Los Angeles, for instance, one of the men kept a record for 13 days, of all vehicles that he saw driven by animals. In that time he saw only six vehicles propelled in the old fashioned way.

The party, too, were convinced that roads in the great West, because of the spare population, will have to be built by some such national agency as that provided by the Townsend bill.

On one stretch of 50 miles there were only three taxpayers. Autocar trucks will be shown at the National Motor Truck show in the Eighth Coast Artillery Armory in New York city, January 3 to 10, and also in the motor truck show at Chicago in the International Amphitheater, January 24 to 31.

ANSWERS GIVEN TO  
MOTOR QUESTIONS

Q. What progress has been made recently in lug construction for mountable rims? It is somewhat of a nuisance to take off the nut and lug and scatter them all around, especially at night, and oftentimes a nut will fit only a specific bolt, although they should fit all, being a standard thread.

A. With the exception of one design I have seen nothing new in this direction. The new designs I have in mind combine a nut and lug that always stay on the felloe of the wheel, so it never will be lost. I believe it is made in New York City by the Auto Products Company or by the New York Rim Lug Company. If you will simply address them, Broadway, New York, I think the letter will reach them.

Q. (1) Is it unwise to disconnect the fan in cool weather? I have a little six Loxie that runs so much better when the fan is not working. (2) Does a Victoria top save the wear and tear on rear tires to any great extent? (3) Is there any great improvement in recent car bumpers and if so, which would you advise for the car mentioned above?

A. (1) Some owners deliberately allow the fan belt to slip or take the belt off altogether in cold weather. It is better, however, to use a radiator cover or some such device and allow the fan belt to operate normally. (2) The top has nothing to do with tire wear. (3) The plain tube type now is produced by nearly all makers and is the most advanced design.

Q. In looking at my front tires the other day I noticed that one of them was worn pretty badly, as though the wheel were not running true. Is it possible for one wheel to be out of line and not the other? What causes it?

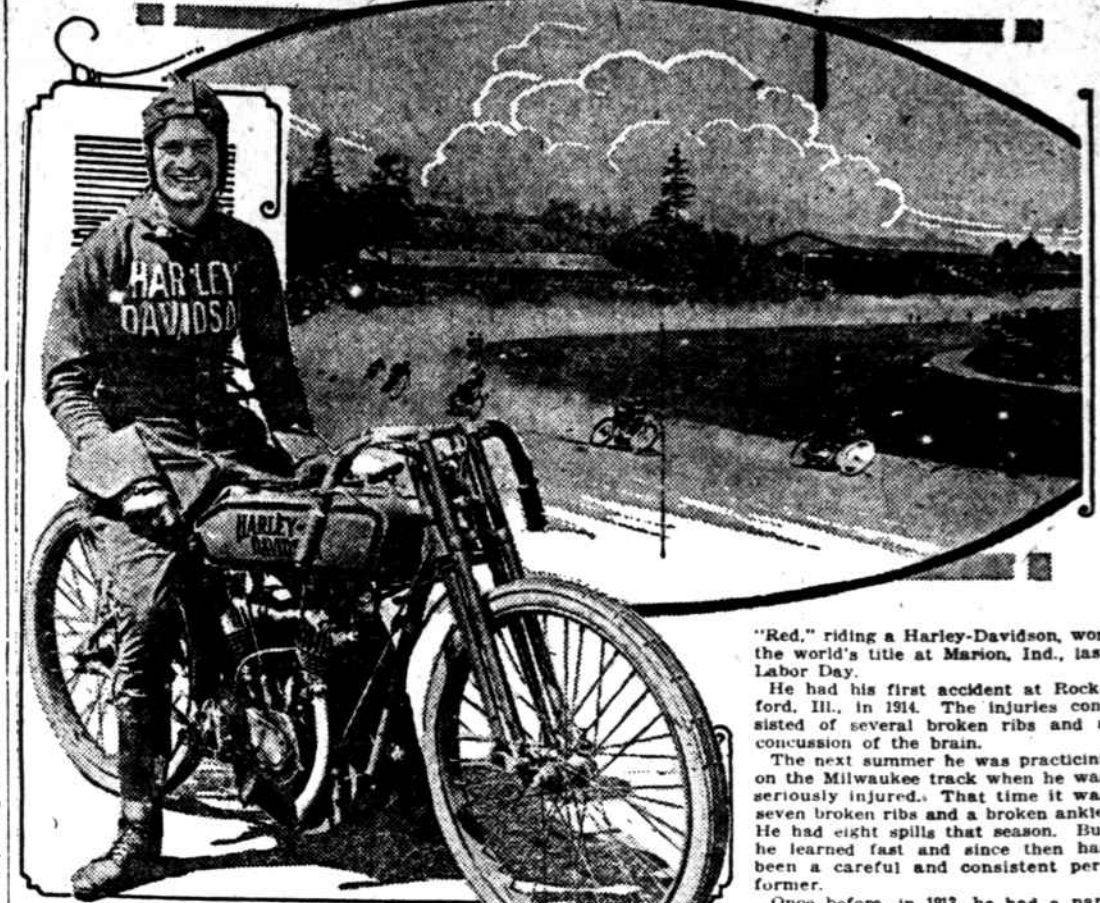
A. One wheel may be wobbly, due to a worn bearing or a bearing not properly adjusted, or the rim may not be mounted true and you get the effect of a wobbly wheel.

Spare Tire Causes Trouble.  
The car owner who carries a spare tire—and a great many of them do it—unprotected on the rear of his car, is sure to have trouble for himself. Even if no more serious accident happens, dust collects on the inside of the spare casing and is turned to mud by the first shower. Then when the casing is called into service the inner tube will be rubbed against this hard deposit of mud, with chafing and a speedy blow as the result. Cases for the spare tire cost little, but they should always be used to protect and preserve the spare tire for its day of service.

Silent Chains Much Used.  
Silent chains that are now so much used for camshaft and electrical unit drive should be treated exactly as if they were sets of bearings. Each joining stud and rivet of the chain should be regarded as a bearing and must above all be given systematic and careful lubrication. Chains that run in the open need oil treatment once a day. The oil should be put on the inside, as this is the part that comes in direct contact with the sprockets. An oil brush is the most convenient method of distributing the oil along the surface of the chain.

How to Cut Oil Grooves.  
In cutting oil grooves in a bearing the cut should be made V shaped and not U shaped, as is so often mistakenly done. The U shaped cut, because of its sharp angle with the shaft, has a tendency to scrape or wipe oil from the shaft, while the angle of the V cut avoids this and permits proper distribution of the oil.

## CHAMPION RACER FEELS AS SAFE ON TRACK AS HE DOES IN BED, BUT HAS HORROR OF THE STREETS



Leslie Red Parkhurst

"I feel as safe on the track in the course of a championship race as I do in my own little bed, but I have a dread of the city streets."

Leslie "Red" Parkhurst, world's champion motorcycle racer, speaking. The veteran of a hundred thrillers, survivor of numerous accidents, got his worst scares of smash-ups on the streets—accidents he was in no wise to blame for but the result of carelessness on the part of others.

Accidents were a part of the game with the motorcycleists of old but nowadays they are not so common. Traffic accidents are still common, however. "Safety in racing lies in good judgment," said Parkhurst. "For instance

when in a race if a rider gets behind and the dust gets too thick there is nothing to do but drop out. He shouldn't take chances at such times. He should be consistent. He'll get further ahead in the racing game."

Parkhurst learned through experience. He started this life back in North Dakota in 1910 and his first racing was on Indian ponies and with real Indians as his competitors. Later he moved to Denver and he tried bicycle racing but his mind wasn't good enough. And then came the motorcycles. They suited "Red." In 1912 he started as a professional in the motordrome at Dallas and since then it has been one succession of victories.

"Red," riding a Harley-Davidson, won the world's title at Marion, Ind., last Labor Day.

He had his first accident at Rockford, Ill., in 1914. The injuries consisted of several broken ribs and a concussion of the brain.

The next summer he was practicing on the Milwaukee track when he was seriously injured. That time it was seven broken ribs and a broken ankle. He had eight spells that season. But he learned fast and since then has been a careful and consistent performer.

Once before, in 1913, he had a narrow escape from injury when his gasoline tanks caught fire while he was traveling at ninety-five miles an hour. He leaped safely from the speeding machine.

Since 1915 the only accidents he has had that amounted to anything were those on the street—the ones he fears most. He had two this year. After winning the championship at Marion a new owner of a motorcycle collided with him on the street, smashing his racer. This rider was going about fifteen miles an hour and "Red" had just come from the track where they were doing better than ninety an hour. Again at Rockford a man who was learning to drive a new car crashed into him.

Parkhurst is 34 years old, weighs 162 pounds and stands six feet one. He is married.

### Lubrication Hint.

Trouble is often experienced with over-lubrication of the front cylinder of the Ford car, the oil forcing its way past the piston rings and causing excessive carbon. This is caused by the connecting rod of the front cylinder dipping too deeply into the oil. A cure is suggested as follows: Level up the crankcase by raising and blocking up the front end of the motor. This is accomplished by placing a pad under the crankcase front frame bearing. If there is a decided pitch to the crankcase it may be necessary to use a block that will require longer spring clips. The alignment of the motor will not be affected.



—Japan now has 5,000 motor cars.  
—Gasoline sold for 6 cents a gallon in 1908.  
—Licensed chauffeurs in Michigan total 43,285.  
—The first six-cylinder car was produced in England.  
—There were only four automobiles in the United States in 1896.  
—Pennsylvania has 2,419 farm tractors in operation throughout the State.  
—The State of Ohio has more motor trucks than any other State in the Union.  
—Eighty-five per cent of all the automobiles in the world are in the United States.  
—Greece is to spend \$500,000 in buying road building machinery of the most modern type.  
—In the past twenty years, 7,700,000 automobiles have been produced in the United States.  
—There are more motor cars on the streets of Calcutta, India, than any other kind of vehicle.  
—The average valuation of the 6,146,000 automobiles in use in the United States is \$1,000 each.  
—There were 4,326 passenger cars of 14 different makes registered in the Philippine Islands in 1918.  
—According to tax returns from Cleveland, Ohio, the motor industry leads all others in that city.  
—Since 1917 the census of auto-

mobiles in the Southern States has increased more than 100 per cent.

—The present demand for automobiles in Sweden is 300 per cent greater than that prevailing in 1914.

—Before this year closes it is expected that 5,602,000 motor vehicles will be in operation in this country.

—It requires 25,000,000 tires to equip the passenger automobiles and motor trucks used in the United States.

—While there are 250,000 miles of railway in the United States, the motor car has the use of 2,500,000 miles of highway.

—An English syndicate has purchased all of the 16,000 reserve motor vehicles from the American third army at Koblenz, Germany.

—Automobile manufacturers in the United States shipped in one month 6,282 passenger cars and 1,250 trucks to foreign countries.

—Queen's University, in Toronto, Canada, intends establishing a course in road-making in connection with its practical science department.

—Much interest is being shown in China in motorcycles, due to the fact that they can travel on the narrow paths used by foot passengers and for wheelbarrows.

—American motorists will have spent over \$1,000,000,000 for automobile and truck tires during 1919. This amount does not include money expended for inner tubes and repair materials.

—Approximately \$8,000,000 is now available for highway construction in Nevada up to the end of 1921 through such sources as State revenue, State and county bond issues, Federal aid, etc.

In a New York official investigation it was shown that the motorists were losing about 2 per cent through incorrect gasoline measuring pumps. As the consumption there is about 100,000 gallons a year, the loss is 1,000 gallons a year, or \$20,000.

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32x3 1/2	13.70	34x4 1/2	22.50
31x4	16.20	35x4 1/2	23.60
32x4	16.70	36x4 1/2	24.20
33x4	17.00	37x4 1/2	25.00
34x4	18.70	37x5	28.50

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30x3 1/2	10.50	11.90	11.90	2.50	1.55	\$14.64
31x4	13.40	18.65	18.65	3.15	2.10	22.50
32x3 1/2	11.80	13.95	13.95	2.40	1.85	21.00
32x4	15.70	18.95	18.95	3.25	2.20	23.60
33x4	16.40	19.90	19.90	2.40	2.30	27.30
34x4	16.75	20.35	20.35	2.55	2.40	21.60
35x4 1/2	21.20	24.25	24.25	3.20	2.80	31.90
36x4 1/2	21.50	25.80	25.80	4.20	2.95	29.65
37x4 1/2	22.40	27.10	27.10	4.25	2.95	30.02
38x4 1/2	22.75	27.50	27.50	4.40	3.10	30.75
37x4	24.70	30.00	30.00	4.70	3.20	31.75
38x5	25.05	30.00	30.00	4.75	3.45	34.75
38x5 1/2	25.55	31.80	31.80	5.10	3.55	36.50
37x5	27.10	32.70	32.70	5.30	3.70	38.15

31x4 Goodyear Cat. Non-skid \$16.05, 30x3 1/2 \$10.50, 28x3 Goodyear AWT Motorcycle tires \$9.25.

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